

ABSTRACT

COMPOSITIONS AND METHODS FOR SEPARATION OF MOIETIES ON CHIPS

The present invention recognizes that separation of components of a sample facilitate, and are often necessary for, sample analysis. Dielectrophoretic separation provides an efficient, reliable, nondisruptive, and automatable method for the separation of moieties in a sample based on their dielectric properties. The present invention provides compositions and methods for enhancing the dielectrophoretic separation of one or more moieties in a sample. A first aspect of the present invention is a solution that when mixed with a sample, modifies at least one dielectric property of one or more components of the sample and has a conductivity such that one or more moieties of the sample can be separated using dielectrophoresis. Such solutions can be used in the analysis of samples on chips, and can be used in methods that use binding partners, including microparticles that can be translocated by dielectrophoretic forces, traveling-wave dielectrophoretic forces or magnetic forces.

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